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GRADUATE TRAINING IN SURVEY RESEARCH: THE POTENTIAL OF AREA STUDIES

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Graduate Training in Survey Research: The Potential of Area Studies

ABSTRACT

Area studies have been used for over 35 years as a vehicle for teaching graduate students practical survey research methodology and promoting social science research. This paper describes two area studies, and compares the effectiveness of alternative approaches to graduate education using sample surveys.

Given the degree to which survey results appear in North American sociological journals, the case for providing survey training to all sociology graduate students (whether or not they plan to use survey results in their thesis research) can be easily made. Without some understanding of basic research methods and social statistics, students cannot become sophisticated consumers of research findings (Blalock 1989). Furthermore, while fewer teaching positions in universities have been opening up in the past few years, more sociology graduates are finding employment in government and private sector organizations involved in survey research. An adequate training in survey methods can, thus, significantly improve a student's career opportunities.

While most sociology departments build some exposure to survey research methods into their graduate curriculum, seldom does this training have an applied "hands-on" component. Instructors in statistics and / or research methods courses may make reference to their own research, involving students in discussion of the survey design and the results. But often the training is much more distant from the real world of research. As active researchers know all too well, textbooks and lectures alone are no more useful for teaching the art and science of survey research than they are for driver training. The advantages of direct experience of the survey process are considerable (Schuman 1977, pp.130-1).

There are at least five basic stages in a face-to-face

survey (these would differ somewhat in a mail or telephone survey) where graduate students could benefit from participation. Beginning with the first stage, most students are unaware of just how difficult it is to translate a general set of research questions into reliable and valid questionnaire items or, for that matter, to organize these items into an efficient research instrument. Conceptual, question construction, and questionnaire design skills can all be improved through active participation in the pre-data collection stage of a survey.

Elegant and sophisticated sampling designs are easier to describe in textbooks than they are to implement, as graduate students working on an Area Study would soon discover. The costs and time involved in obtaining interviews from randomly selected respondents across a city would also quickly become apparent if students had a chance to participate in the sampling stage of a survey.

The experience of interviewing is one which every user of survey data should gain but, unfortunately, many do not. It is all too easy to forget that respondents in a survey are individuals, each with their own history of personal experiences. The survey data they provide is only a small portion of the information necessary to account for their specific attitudes and behaviours. Along with the extent of unexplained variance, naive users of survey data are also typically unaware of just how much "error" is built into survey responses (Schuman 1977, p.130). Interviewing directly exposes students to nonrandom measurement

errors resulting from response sets, poorly worded questions and so on. Participation in the interviewing stage of a survey can, thus, provide graduate students with a much better understanding of the data they analyze and interpret, a skill necessary for attempts to build measurement-error assumptions into theory-testing applications such as LISREL (see Hayduk 1987). This also applies to the coding and cleaning stage of survey research, a point in the research process where further error can be introduced.

The completion of an annual Area Study within a sociology department provides an excellent opportunity for applied graduate training at each of these stages in the survey process. While the last stage, analysis of survey data, can be taught using other available data sets, there are also obvious advantages to introducing students to a recent and local data set.

In short, Area studies have the potential to be very useful teaching tools. The challenge then becomes one of linking a department's graduate training program to the research schedule and demands of an Area Study.

THE AREA STUDY CONCEPT

The Detroit Area Study (DAS) of the University of Michigan, the original model, operates its survey as a graduate research and training unit in survey research methodology (see Schuman 1977). The survey, executed on an annual basis since 1951 within the Detroit SMSA, provides students an opportunity to learn about

survey methodology in the context of a substantial research project. In addition to teaching, the survey attempts to provide a service to social scientists and the community by making available social science data (ESRC 1985/86,p.5).

Several academic institutions in North America (e.g. Wisconson-Madison; Winsborough 1987) and Great Britain (e.g. Surrey University; ESRC 1985/86) have initiated survey research facilities along the Detroit model. Administratively, some surveys operate in specialized research units within social science departments, while others are part of a larger interdisciplinary network. In terms of content, Area Studies tend to be either omnibus or amalgam type surveys, or studies concentrating on a particular theme. Whatever their form, they serve as vehicles for graduate student training, forge a valuable link between academia and the community, and provide research opportunities for graduate students, faculty, and investigators outside academia. Area Studies, however, vary substantially in the degree and quality of graduate student participation.

An overview of the Detroit Area Study (Schuman 1977,pp.132-4) reports that, over the years, graduate students have been involved in questionnaire design and data collection (primarily in pre-testing). There appears to have been less direct participation in sampling, and involvement in coding and cleaning of data seems to have decreased. Students do analyze some of the data for a required term paper, and may access the data for thesis and dissertation research.

Other sociology departments conducting annual Area Studies have integrated their graduate training programs with these surveys in different ways. Below we describe the degree of graduate student participation in the Edmonton and Winnipeg Area Studies, and discuss some of the factors responsible for the evolution of somewhat different patterns in each program.

EDMONTON AREA STUDY

The Edmonton Area Study (EAS), conducted annually by the Population Research Laboratory (PRL) at the University of Alberta, began in 1977. Hour long, face-to-face interviews are completed with a sample of about 450 adults, randomly selected from the adult population of Edmonton, a city of around 600,000 residents. The study is one of a variety of research endeavours in which the PRL, a research centre within the Department of Sociology, is involved at any one time.

Originally, the EAS had several objectives including "training graduate students in the methods of survey research by allowing them to participate fully in the planning and execution of a large scale survey", and establishing "an organization with the capability of obtaining data for the measurement of social change in the community" (Kennedy, Northcott and Kinzel 1977, p.3). Further, the study sought to permit opportunities to "refine and test methodological research techniques for the purpose of adding to the knowledge of the survey research process itself" (Kennedy et al. 1977, p.3).

While the EAS continues to be a successful study, several factors have led to limited direct student participation in this Area Study. Three of the most prominent factors are the nature of funding for the area study, the use of fully trained survey personnel, and the absence of program requirements linking graduate methodology courses in the Sociology department to Area Study projects.

Considering funding, completion of the annual EAS is not predicated on participation of graduate students. In fact, neither faculty nor graduate students in the Department are required to obtain funding for the placement of questions on the EAS. The Area Study solicits questions from both faculty and outside clients with only the latter paying for inclusion of their questions. Essentially, department members' research is subsidized by outside paying clients and, indirectly, by the university, since some of the EAS staff are permanent university employees.

The EAS is conducted by professional PRL staff responsible for the management and execution of the survey. Reliance on a trained set of interviewers, coders, and other survey personnel is essential, since the Area Study must be coordinated with other ongoing research projects being completed by the PRL. Three years ago, changing information requirements of outside clientele served as an impetus to the PRL to increase the study population from one major metropolitan area (Edmonton) to an entire province (Alberta). The increased sample allowed an expansion into new

survey methodologies. Telephone interviewing was added, for areas outside Edmonton, to the original face-to-face mode of interviewing. This shift in focus and method is an example of how the EAS has generally been more concerned with the provision of social science research information to the faculty and community rather than with graduate student participation and training.

Finally, the EAS has only weak and informal ties to the graduate program in the Sociology department. There are one-semester quantitative methods courses at each of the M.A. and Ph.D. levels. Unfortunately, the courses operate out of sequence with the important phases of the EAS and tend to be generalist in orientation. Survey research methods are only one aspect of these courses. Thus, student involvement in the EAS has tended to be limited and indirect as the following discussion reveals.

Thematic Development and Questionnaire Construction

A theme for the annual EAS, determined by the Director after consultation with other Sociology faculty members, determines the general nature of questions for a large part of the survey. Sociology graduate students, while not formally excluded, have never been directly involved in questionnaire design and item construction. Most of the questions are submitted by the faculty or by paying clients from within the community. The rest of the items are chosen by the Director to provide continuity in background variables and to allow studies of longitudinal trends.

Question revisions are made through consultation between PRL staff and those submitting the questions, at this point and following the pretest. Occasionally, student contributions to questionnaire construction come indirectly when their thesis supervisor has submitted questions on their behalf.

Sampling

There has been some opportunity for a few students to participate in sample construction, although the sampling design itself is prepared by PRL professional staff. Each year, several graduate students are assigned to the PRL as research assistants (other graduate students work as teaching or research assistants and are supervised by individual Sociology faculty members). Among their duties are address checks on the sampling frame and other clerical tasks associated with this and later stages of the survey. Thus, while these specific graduate students are participant observers of other aspects of the study (including interviewer training, pre-testing, and interviewing) they are not as actively involved as are graduate students in some other Area Studies.

Data Collection

In the early years of the EAS, students enroled in the department's compulsory graduate research methods course participated in pre-testing of the questionnaire. After several hours of "interviewer training", each student was instructed to

complete about half a dozen interviews. A debriefing session provided an opportunity to discuss the questionnaire and the experience of interviewing. As Schuman (1977, p.135) noted about the Detroit Area Study, this kind of compulsory participation can lead to concerns about coercion and exploitation of students. Although graduate students were typically given an alternative assignment if they did not wish to participate in the pre-testing, such concerns did surface.

Student involvement in this stage of the study was discontinued some years ago, and paid professional interviewers now complete all of the pretests. An equally important consideration underlying the decision to use only professional interviewers in the pretest was the observation that their prior experience in the field gave them considerably more insight into potentially problematic questions. Students who had never interviewed before were much less likely to pinpoint problems in wording and sequencing of questions. In retrospect, it appears that the pre-testing experience might have been more valuable if, as in other Area Studies, graduate students had also participated in earlier stages of the study, particularly question construction. The relevance of the questions they were asking might then have been more apparent.

Data Processing

The several graduate students employed as research assistants in the PRL each year have been involved in

construction of codebooks, cleaning of data, and writing of SPSSx programs to process the data. While these tasks can become mundane, they do provide opportunities to develop some survey research skills. Quite a few of those who have been employed here have managed to translate these skills into good jobs in government departments and private sector firms engaged in survey research. But unlike Sociology departments where all graduate students are at least introduced to this aspect of survey research (whether they wish to be or not), only a few members of each of our graduate student cohorts receive this more extensive practical training.

Data Analysis

Graduate and undergraduate sociology students at the University of Alberta may, however, have had more opportunities for secondary analysis of Area Study data. Perhaps most importantly, the results of each annual study are made public about six months after those submitting questions have been given their data.[1] Thus, each year, students have access to a data set that is less than a year old. If their faculty advisor has

[1] Given that a considerable amount of direct and indirect support for the study is provided by the university, it has been the PRL's policy to provide public access to the data as soon as possible for each study.

submitted questions for them, it is possible for students to begin analysis within three months of the data being collected.

In addition, the PRL has actively promoted the cumulative data sets by circulating a Topic and Question Index to each new cohort of students, inviting them to use the data for term paper and thesis projects. The various EAS data sets have also been valuable teaching tools in undergraduate and graduate statistics and research methods courses.[2] Exposure to the data through class assignments has meant that most graduate students are aware of this unique data resource. If students have any questions about the Area study, they may ask the staff in the PRL. Consequently, over the past twelve years, 11 M.A. or Ph.D. theses using EAS data have been completed, and another 2 are underway. There are also 35 published papers or books and 74 working papers based on EAS results.

WINNIPEG AREA STUDY

The Winnipeg Area Study, a project of the Department of

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[2] Classroom use of the data also provides an ideal opportunity to discuss sampling design, measurement, and questionnaire design issues with local, recent examples. However, this after-the-fact exposure to the EAS does not provide as good a learning experience as would actual participation in the study.

Sociology at the University of Manitoba, is an annual socio-demographic survey of Winnipeg residents. The city has a population of 625,000. The WAS, initiated in 1981, is a 50 minute face-to-face interview of 750 households based on a systematic random sample of all households in the city. The WAS began its operations along the lines of the Detroit Area Study, and cooperates substantially with the Edmonton Area Study. It was inaugurated for two primary reasons: to provide a cost effective vehicle for faculty survey research, and to teach survey research methodology to graduate students.

The Winnipeg Area Study does not have base-line funding, unlike the Edmonton Area Study where the university indirectly supports the study through the maintenance of the Population Research Laboratory. While some non profit-agencies (government, police, social service agencies) do purchase questions on the survey, the backbone of the project is basic academic research funded by research grants to faculty. Over thirty faculty from seven different disciplines (Economics, Family Studies, Nursing, Psychiatry, Psychology, Social Work, and Sociology) have participated in the research. While this is certainly a precarious funding arrangement, the survey has never had to be cancelled because faculty have been unable to obtain sufficient grants. In addition to the Director, who has a teaching load reduction, the WAS has only a Field Coordinator/Secretary as a permanent position. All other tasks are done on a contract basis, with as many as possible done by graduate students. Except for

the pretest, data collection is completed by professional interviewers.[3]

The survey content has an alternating sequence. In even years, a major theme proposed by a faculty member or research team takes up virtually the whole questionnaire except for the annual demographic and quality of life questions. In odd years, an amalgam questionnaire is constructed, which allows six or seven faculty to each contract a smaller amount of space on the survey. Given the tight funding situation, faculty apply for funds as far in advance as two years in order to meet grant competition deadlines.

The pre-test for the WAS is held in the Fall of the year in conjunction with a graduate seminar. The data are collected after the new year in February and March. Researchers receive a clean copy of the data by June, and the data becomes public after two years.

The director of the WAS offers a Sociology graduate course specifically on survey research methods every Fall term. Student participation is voluntary in the course. It attracts from 10 to 15 M.A. and Ph.D. students; about half from Sociology, and the other half from other disciplines such as City Planning,

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[3] The small permanent staff required may be of particular interest to those departments without the resources of a survey research centre to draw upon. An Area Study does not require a large organization.

Education, Natural Resources, Nursing, Psychology and Social Work. All aspects of a survey, from sampling to budgeting, are considered. However, a major portion of time is spent on question construction, order effects and various types of non-sampling errors. The primary responsibilities of the students in the course are conducting interviews as part of the pre-test and writing a research proposal, including review of the literature, theory, hypotheses, sampling frame, questionnaire, codebook and dummy tables. While the classes finish in December, the students are given an extension until April 1st to complete the research project. A good number link the project with another course, or use the paper as a preparation for their thesis proposal.

As part of the agreement to have their questions placed on the Area Study, faculty are expected to come to the graduate seminar to discuss their research prior to the pre-test and then return to receive feedback.

Thematic Development and Questionnaire Construction

Probably the most stimulating part of the seminar occurs when the principal investigators come to the class prior to the pre-test, to explain their theory, hypotheses and questionnaire. Because most of the funding has been acquired through nationally competitive research grants, the theoretical framework tends to be very well defined. Students have been assigned reading on the topic of the research, including the successful research proposal (a particularly important education in itself). They are expected

to do a critique of the research in class. Each student then interviews six designated households in the city, selected as part of a purposive sample.

Two weeks later the principal investigators return to the classroom to receive feedback. By then, data have been entered into the computer, and there is a print-out of at least 65 cases. Students then do another critique based on the frequency distributions, as well as the reactions of respondents to the questions.[4] Specific crosstabulations may be run to test some hypotheses. There has never been a WAS study when the students have not had significant input into changes in the questionnaire.

While classes are conducted in the Fall term, an optional class is held in the Spring to discuss the final version of the instrument, and to see how the data collection is proceeding. Often, the students are well advanced in their own projects by this time and profit from the latest information on the WAS.

Every WAS includes at least one methodology experiment. This is an area in which students are particularly keen to participate. These tests have included rating and ranking procedures, split-half methods of refusal conversions, controlling for such variables as unlisted phone numbers, special delivery versus regular mailings, inclusion or non-inclusion of

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[4] In early years, the pre-test data were not entered into the computer. Students tended to generalize their experience of six cases to everyone.

findings from the previous year in the mailings, and in-person versus phone re-contact. For the 1990 survey, the students developed a 30 item questionnaire to be completed by the interviewer in cases of refusal. This innovation on the WAS is being used as a mechanism to determine both the wisdom and method of re-contact as well as to develop a more systematic profile of final refusals.

Unlike many other Area Studies, because of the lack of a funding base, students in Winnipeg have not yet been able to place their own questions on the survey. However, they are offered the option of putting questions on the survey and paying for them by working on the project as coders or data entry personnel. This is an option derived from the Nebraska Area Study (Booth et al. 1980), but not yet adopted by any students in Winnipeg.

Sampling

This phase of the project has the least participation of students. The City of Winnipeg provides the WAS with a systematic random sample of all households, based on tax assessment rolls, drawn according to our specifications. One or two students are hired to verify the addresses, locate actual units associated with an address, and perform other clerical tasks.

Data collection

As mentioned previously, students registered in the course are all expected to conduct six interviews as part of the pretest. It is our opinion that it is extremely important to actually visit a home and see the conditions under which research is conducted. The ideal would be to have each student visit several social class areas, and different types of dwelling units. However, the logistics of getting around in the city, and concerns about the safety of the interviewers, have led us to identify twelve neighbourhoods of differing characteristics to which individual students are assigned. The debriefing session after the interviewing does allow students to at least share their experiences on how people from different neighbourhoods have responded.

Both the Detroit Area Study and the Edmonton Area Study have raised concerns about the exploitation of students. Our policy has been to assign the students a maximum of six interviews. Students are told why we would like them to interview, prior to the beginning of the course. No reading assignments are given in the week of the interviewing. Even if some students have interviewing experience, they are expected to carry out this phase because of the interaction that takes place with the principal investigators as part of the course. Fifteen percent of the term grade is assigned on the basis of the quality of their interviews.

Unlike the EAS, we expect graduate students to complete the pre-test interviewing. However, we do not hire students for the

main data collection phase. Our experience has been that when students are hired, term papers and other course obligations interfere with interviewing responsibilities. In-person interviewing seems to create this tension much more than telephone interviewing, especially because in-person call-backs require a great deal of time.

Data Processing

Students are hired for several tasks in this phase. One student is hired for quality control. He/she checks the completed questionnaires daily as they are returned to the office, and reports any problems to the Field Coordinator. Because the student has completed the course and has a detailed sense of the research instrument, this has been an effective way of both monitoring the interviewers (a particularly difficult problem for in-person surveys), and highlighting to students this potentially significant source of non-sampling errors. Coding, programming, and data entry are all tasks given to students. It should be noted that often the students are often first hired as research assistants on the project. Then, as part of their involvement, they may also take the course.

Data analysis

In the Spring of each year, another faculty member offers an advanced course in statistical analysis. While he does not require students to use the Area Study data, many do, partially

because many students take both courses.

Students (and faculty) in various departments use WAS data for a number of purposes: to prepare papers for courses; to compare their findings from a different sample with the WAS city-wide sample; to prepare research proposals, or simply to do secondary analysis.

The most obvious use of the WAS should be for student theses or dissertations. Here, the Winnipeg Area Study has not had as much success as the Edmonton Area Study although some students have written research reports for government or social service agencies based on WAS data. Faculty use of the WAS has been much more extensive (23 refereed publications and 39 working papers). A comprehensive topic and question index has been compiled, but even with ease of access to high quality data, students have preferred to do their own data collection or to use other secondary data sources for their thesis or dissertation research.

CONCLUDING COMMENTS

While survey research is only one form of quantitative sociological research, it is a very prominent one. Is conducting an Area Study an effective means for training graduate students in quantitative sociology? To help answer this question, consider the increasing costs of administering a survey and decreasing funds for social science research (Rossi, Wright and Anderson 1983). Area studies, because of their shared costs and more localized focus, allow much greater flexibility than other

research designs for methodological innovations and the collection of detailed information at a low cost. In addition, they provide "apprenticeship" opportunities which can be invaluable training opportunities. Nevertheless, different methods of organizing an Area Study lead to different degrees of student participation.

The day-to-day demands of a large permanent research centre, such as the PRL in Edmonton, have meant that fewer graduate students are active participants in the EAS. Time lines and other constraints of a series of continuing research projects have tended to take precedence over the teaching opportunities provided by the EAS. Alternatively, the same institutional factors have also meant that a large number of graduate students have been able to use EAS data in their thesis research, and a smaller number have been able to significantly improve their survey research skills by serving as research assistants assigned to the PRL.

Unlike the Edmonton Area Study, the Winnipeg Area Study functions as a single, focal project that brings together faculty and students interested in survey research. The twin goals of providing faculty access to a high quality sample and professional data collection at reasonable cost, as well as training graduate students in survey research methodology, have proven to be compatible and mutually beneficial.

Assessments of one approach as better than another are probably of less consequence than the recognition that, for both

the EAS and WAS, the Area Study is a research vehicle that can enhance graduate student training. Institutional differences have led to different approaches to completing the Winnipeg and Edmonton Area Studies. The variations described in this paper suggest some of the possibilities open to Sociology departments that might wish to introduce an active survey research component to their graduate programs.

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